

Quartz Processing Plant

Lindapter FloorFast® provided a solution for securing steel chequer plate flooring.

Project Background

Location: Haltern am See, Germany
Product: Type FF FloorFast®
Market: Mining
Client: Quarzwerke GmbH
Contractor: MAW - Stahlbau Eulberg GmbH & Co. KG



The Quarzwerke Group is an independent family-owned company with over 137 years of experience in the extraction, processing and refining of industrial minerals. Their main locations are in Germany and Central Europe and have a product portfolio that includes raw materials such as quartz, kaolin and feldspar.

Client Requirement

As part of their continued growth strategy, Quarzwerke were planning an expansion of their quartz processing plant at Haltern am See. The expansion included the construction of a seven-storey steel framed tower, designed to house six huge silos, on the side of the existing building. They needed a practical solution for fastening approximately 1400m² of steel chequer plate flooring on five of the seven floors. Due to the heights involved above the silos on four of the floors it was imperative, for safety reasons, that drilling on site was avoided.



FloorFast installed underneath the finished floor



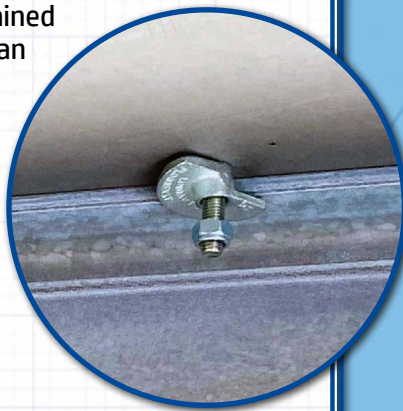
FloorFast stepped cast body securely clamps to the steelwork

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Design Solution

The contractor approached Lindapter to find out if there was a solution for fastening the steel chequer plate flooring to steelwork without drilling. Lindapter were able to quickly confirm that the Type FF FloorFast fixing was the perfect product and arranged to meet the project manager to provide further information and give a product demonstration.

During the meeting it was explained that the Type FF FloorFast was an innovative floor fixing designed to eliminate on-site drilling. FloorFast consists of a cast body with stepped clamping face which locks under the steelwork, providing outstanding clamping force and a secure connection.



Installation

Before delivery to the construction site, each sheet of steel chequer plate flooring was drilled and countersunk at the contractor's fabrication workshop. Once the steel flooring had been delivered to site the FloorFast fixings were pre-assembled into each hole with the stepped cast body on the underside held from above by a countersunk socket setscrew with locking nut. The sheets of steel flooring were then hoisted to the required floor level by crane and laid flat into position. To complete the installation each countersunk socket screw was tightened down using a hexagon key ensuring the stepped body underneath was locked under the steelwork.

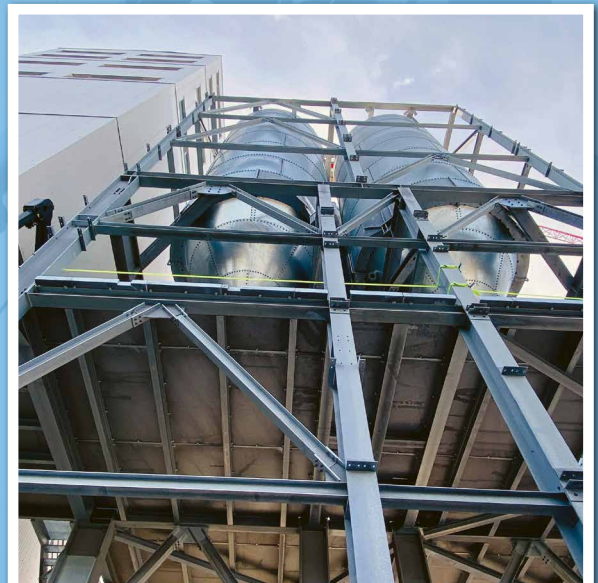


[Click here to watch the installation video](#)

Result

Type FF FloorFast provided an easy to install solution that required no onsite drilling which in turn made the whole installation of the steel flooring over five floors much quicker and safer whilst working at height.

FloorFast also has Lloyd's Register Type Approval for resistance to shock and vibration, and whilst vibrations in the tower were low, the addition of a locking nut on each connection provided peace of mind to the contractor. It would also allow them to lift the steel flooring sheets without dropping the cast body so they could easily refit the steel flooring if necessary.



The new seven-storey steel tower and silos were attached to the existing building

Key Benefits

- ✓ No onsite drilling
- ✓ Safer installation at height
- ✓ Quick and easy to install
- ✓ Vibration resistance approval

